



Alpha Magnetic Spectrometer  
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## Alpha Magnetic Spectrometer Weekly Reports

July 30, 2004



National Aeronautics and  
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### Upcoming Events:

- Thermal Control System (TCS) Delta Critical Design Review ( $\Delta$ CDR) - October 2004 – JSC
- Tracker Thermal Control System (TTCS) PDR - January 2005, CDR - April 2005
- STA Vacuum Case Delivery (on dock at STADCO) - October 22, 2004
- Flight Vacuum Case Delivery (on dock at STADCO) - December 11, 2004
- AMS General TIM - October 18 - 22, 2004 – JSC
- AMS General TIM - January 10 - 14, 2005 – KSC
- AMS-02 Avionics Functional Interface Test (FIT) - January 2005
- AMS-02 Phase II Safety Review - March 2005 - JSC

### Upcoming Tests:

- O-Ring Test Fixture (OTF) Vacuum Test - On going - J13
- STA Acoustic Test - Date TBD - ESTEC - Noordwijk, Netherlands (Schedule under review)
- STA Sine Sweep Test - Date TBD - INFN - Terni, Italy (Schedule under review)
- Full Assembly Modal & Static Tests - Date TBD - IABG - Munich, Germany
- Interface Plate Static Test - Date TBD - Location TBD
- Lower Joint Static Test - Date TBD - Location TBD

### Status:

- Preparations are continuing for the inaugural meeting of the Alpha Magnetic Spectrometer - 02 (AMS-02) Configuration Control Board (CCB) to be conducted on August 4, 2004. The agenda for the meeting was finalized and posted to the AMS Engineering Directorate (EA) Internal Website. The two documents [Project Plan and Configuration Management Plan (CMP)] to be baselined at the CCB were reviewed, formatted and uploaded to the website. The Project Technical Requirements Specification (PTRS) has been deferred until the September CCB.



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- NASA and Lockheed Martin (LM) AMS project managers traveled to Hans Bieri Engineering (HBE) in Winterthur, Switzerland and Space Cryomagnetics Limited (SCL) in Oxford, England to review the status of the superfluid helium tank manufacturing and AMS-02 cryomagnet assembly, respectively. The purpose of the trip was to indoctrinate the new NASA AMS Project Manager into key activities being performed by the AMS Collaboration in support of the AMS-02 Payload.
- The piece part and assembly drawings for the Rotation Frame on the Vacuum Case Test Fixture (VCTF) were revised to incorporate the latest design changes. The updated drawings were provided to the Stress Group for review. The Rotation Frame redesign was undertaken to simplify the design and reduce fabrication costs.
- The Transition Frames (special test equipment) used for the Sine Sweep Test are being redesigned to reduce manufacturing costs.
- Efforts are continuing on updates to the drawings for Payload Integration Hardware (PIH) Interfaces for inclusion in the AMS-02 Experiment/Payload Integration Hardware (PIH) Interface Control Document (ICD).
- Vacuum Case Activity at STADCO
  - Negotiations with STADCO resulted in the return of the delivery of the Structural Test Article ( STA) Vacuum Case to October 13, 2004, but slipped delivery of the Flight Unit to December 11, 2004. Discussions with the vendor are ongoing.
  - The Vacuum Case Milestone Payment Schedule was updated to reflect the latest fabrication schedule received from STADCO.
- Vacuum Case Milestones
  - First Article Conical Flange Complete - July 2004
  - Weld Fixture Complete - August 2004
  - STA Support Rings Complete - August 2004
  - Weld Development Complete - August 2004
  - STA Conical Flanges Complete - August 2004
  - Shipping Fixture Complete - August 2004



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- STA Line Drill Operations Complete - August 2004
- Flight Support Rings Complete - September 2004
- First Article Weld Complete - September 2004
- Flight Conical Flanges Complete - September 2004
- STA Match Drill Procedure Complete - September 2004
- STA Weld Complete (for proof test @ STADCO) - September 2004